IN THE CLAIMS

Claims 1-20 are presented below, with claims 1-16 and 18-20 pending. As shown below,

the claims have not been amended in this response, but are presented for the ease of reference.

---

1. (Original) Transmission method for transmitting OFDM-signals,

comprising the steps of

modulating said signals onto a plurality of subcarriers using a OFDM-modulation

method,

transforming said modulated signals into the time domain, and

transmitting said signals

characterized in

that in said modulating step every M-th subcarrier is modulated with a signal, wherein M

is an integer and M ≥ 2.

2. (Original) Transmission method according to claim 1,

characterized in,

that the not modulated subcarriers are set to zero.

3. (Previously Presented) Transmission method according to claim 1,

characterized in,

that M=2 and only subcarrriers with even indices are modulated.

4. (Previously Presented) Transmission method according to claim 1,

characterized in,

that said modulation step comprises the steps of

generating integer values form 0 to L-1, wherein L is the number of available subcarriers,

and

modulating every M-th signal onto said subcarriers on the basis of said integer values.

5. (Original) Transmission apparatus for transmitting OFDM-signals, comprising:

modulation means (4) for modulating said signals onto a plurality of subcarriers using a

OFDM-modulation method,

transformation means (5) for transforming said modulated signals into the time domain,

and

transmission means for transmitting said signals

characterized in

that in said modulation means every M-th subcarrier is modulated, wherein M is an integer and

$M \geq 2$.

6. (Original) Transmission apparatus according to claim 5,

characterized in,

that in said modulation means (4) the not modulated subcarriers are set to zero.

7. (Previously Presented) Transmission apparatus according to claim 5,

characterized in,

that in said modulation means (4) M = 2 and only subcarriers with even indices are modulated.

8. (Previously Presented) Transmission apparatus according to claim 5,

characterized in

that said modulation means (4) comprises means (10) for generating integer values from 0 to L-1, wherein L is the number of available subcarriers, whereby said modulation means (4) modulates every M-th signal onto said subcarriers on the basis of said integer values.

9. (Previously Presented) Receiving method for receiving OFDM-signals comprising M identical or respectively mirrored wave forms within one OFDM-timeburst, wherein M is an integer and M ≥ 2, comprising the steps of

receiving said OFDM-signals,

correlating said waveforms to obtain time synchronization using M-1 correlators,

transforming said signals into the frequency domain, and

demodulating said signals.

10. (Original) Receiving method according to claim 9,

characterized in,

that in said correlation step said wave form parts are correlated on the basis of a delay value L1=S/M samples and averaged over L2 ≤ S/M samples, whereby S is the total number of samples in one OFDM-timeburst.

00161043

11. (Previously Presented) Receiving method according to claim 9,

characterized in,

that after said correlation step a peak detection step is carried out to provide time synchronization

for said transformation of said signals into the frequency domain.

12. (Previously Presented) Receiving method according to claim 9,

characterized in,

that after said correlation step a frequency offset detection step is carried out to provide

frequency synchronization for said transformation of said signals into the frequency domain.

13. (Previously Presented) Receiving apparatus for receiving OFDM-signals comprising M

identical or respectively mirrored wave forms within one OFDM-timeburst, wherein M is an

integer and $M \geq 2$, comprising:

receiving means for receiving said OFDM-signals,

correlating means (28, 29, 30, 31) correlating said waveforms to obtain time

synchronization, wherein said correlation means includes M-1 correlators,

synchronization, transformation means for transforming said signals into the frequency

domain, and

demodulating said signals.

00161043

10

14. (Original) Receiving apparatus according to claim 13,

15

F1
concle

characterized in,

that in said correlation means (28, 29, 30, 31) said identical wave forms are correlated on the

basis of a delay value L1 = S/M and averaged over L2 ≤ S/M samples, whereby S is the total

number of samples in one OFDM-timeburst.

17

15. (Previously Presented) Receiving apparatus according to claim 13,

15

characterized in,

that after said correlation means (28, 29, 30, 31) a peak detection means (46) is provided for

providing time synchronization for said transformation of said signals into the frequency domain.

18

16. (Previously Presented) Receiving apparatus according to claim 13,

15

characterized in,

that after said correlation means (28, 29, 30, 31) a frequency offset detection means (47) is

provided for providing frequency synchronization for said transformation of said signals into the

frequency domain.

17.   (Canceled)

19

18. (Previously Presented) Transmission system for transmitting OFDM-signals, comprising:

F2
cont

a transmission apparatus including modulation means for modulating said signals onto a

plurality of subcarriers by OFDM-modulation, transformation means for transforming said

modulated signals into the time domain, and transmission means for transmitting said signals

characterized in that in said modulation means every M-th subcarrier is modulated, wherein M is an integer greater than or equal to 2; and

a receiving apparatus for receiving said OFDM-signals having M identical or respectively mirrored waveforms within one OFDM-timeburst, including receiving means for receiving said OFDM-signals, correlation means for correlating said waveforms to obtain time synchronization, transformation means for transforming said signals into the frequency domain, and demodulation means for demodulating said transformed signals.

19. (Previously Presented) Transmission method according to claim 1, wherein:

said modulating step includes providing a switch control signal to a switch having a first input and a second input, wherein the first input receives a signal to be modulated onto a subcarrier and the second input receives a zero value signal.

20. (Previously Presented) Transmission apparatus according to claim 5, wherein:

said modulation means includes a switch having a first input and a second input, wherein the first input receives a signal to be modulated onto a subcarrier and the second input receives a zero value signal.

00161043